

REMARKS

Applicants respectfully request the Examiner's consideration of the present application. Claims 1-31 remain in the application. Claims 1, 15, and 23 have been amended. No claims have been cancelled.

Examiner rejected claims 1-2 and 5-31 under 35 U.S.C. §102(e) as being anticipated by US Patent No. 5,838,306 of O'Connor, et al ("O'Connor"). With respect to claim 1, the Examiner states that O'Connor discusses a touchpad device having a detection array with a detection surface configured to receive a fingerprint image. The examiner further asserts that the touchpad device operates as a pointer control device or a fingerprint recognition device. Applicants respectfully disagree.

O'Connor describes a mouse for cursor control that includes a separate impression area for a fingerprint. The fingerprint impression area operates as a fingerprint recognition device and as a button providing normal switching functions. (O'Connor, col. 3, lines 8-22, col. 4, lines 3-4). The fingerprint impression area does not operate as a pointer control device to move a cursor. Rather, the ball within the mouse is used to produce cursor movement. (O'Connor, col. 3, lines 23-26).

In contrast, claim 1 recites:

1. A touchpad device comprising:
 - a detection array having a detection surface, wherein the detection surface is configured to receive a fingerprint image;
 - a processing device to receive image data from the detection array, the processing device further to configure the touchpad device to operate as a pointer control device to move a cursor or a fingerprint recognition device based upon parameters associated with the image data.

not in the
(Claim 1, as amended) (emphasis added). O'Connor does not teach or suggest using the fingerprint image as a device to control cursor movement, as recited in claim 1. Furthermore, O'Connor does not teach or suggest using parameters associated with the fingerprint image to configure the use of the fingerprint image. Rather, O'Connor uses standard mouse functionality for cursor movement, and fingerprint images are

not in the claim

solely used for recognition. Thus, O'Connor does not need or use parameters to distinguish between a fingerprint recognition function and a pointer control function.

Examiner references Figure 2 of O'Connor, along with column 4, lines 1-10 and column 6, lines 48-55. Applicant respectfully wishes to point out that Figure 2 of O'Connor discusses only acquiring and processing fingerprints for user identification (See O'Connor, column 4, lines 16-62). Furthermore, column 4, lines 1-10 discusses "switch areas" on a mouse. These switch areas in standard mice are used to make a "selection" for "drag-and-drop" and similar actions. The switch areas are not used to move a cursor. O'Connor notes this as well, at column 4, lines 3-7. Column 6, lines 48-55, of O'Connor discusses how fingerprints are acquired. Nowhere does O'Connor discuss switching the functionality between fingerprint acquisition and cursor movement control.

Therefore, claim 1, as amended, is not obvious over or anticipated by O'Connor. Claims 2 and 5-14 depend on claim 1, and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 1, claims 2 and 5-14 are not anticipated by or obvious over O'Connor.

Similarly, claim 15 recites:

15. A multi-function device comprising:
means for supplying a fingerprint image to a detection surface of a detection array;
means for processing the fingerprint image supplied to the detection array, wherein the means for processing configures the multi-function device to operate as a pointer movement control device or a fingerprint recognition device based upon parameters associated with the fingerprint image.

(Claim 15). As discussed above with respect to claim 1, O'Connor does not teach or suggest configuring the device to operate as either a pointer movement control device or a fingerprint recognition device based on certain parameters. Rather, O'Connor has separate mechanisms to implement these separate functionalities – e.g. a standard mouse ball for pointer movement control and a fingerprint sensor for

fingerprint recognition. Therefore, claim 15 is not anticipated by or obvious over O'Connor. Claims 16-22 depend on claim 15 and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 15, claims 16-22 are not anticipated by or obvious over O'Connor.

Claim 23 recites:

23. A method of analyzing a fingerprint image to configure the operation of a multi-function device, comprising:
supplying a fingerprint image to a detection surface of a detection array;
analyzing select fingerprint parameters associated with the fingerprint image;
configuring the multi-function device to operate as a pointer movement control device or a fingerprint recognition device based upon the fingerprint parameters associated with the fingerprint image.

(Claim 23) (emphasis added). As discussed above with respect to claim 1, O'Connor does not teach or suggest configuring the device to operate as either a pointer movement control device or a fingerprint recognition device based on certain parameters. Rather, O'Connor has separate mechanisms to implement these separate functionalities – e.g. a standard mouse ball for pointer control and a fingerprint sensor for fingerprint recognition. Therefore, claim 23 is not anticipated by or obvious over O'Connor. Claims 24-31 depend on claim 23 and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 23, claims 24-31 are not anticipated by or obvious over O'Connor.

Examiner rejected claims 3-4 under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 5,838,306 of O'Connor, et al. in view of US Patent No. 5,732,148 of Keagy, et al. Claims 3-4 depend on claim 1, and incorporate its limitations.

As discussed above, O'Connor recites a mouse having an attached fingerprint sensing platform. However, the fingerprint sensing mechanism of O'Connor cannot be used for pointer movement control. Rather, a separate mechanism is provided for pointer movement control. Keagy discusses a sheet prism based fingerprint sensor.

However, Keagy does not overcome the shortcomings of O'Connor. O'Connor and Keagy in combination do not teach or suggest the use of fingerprint parameters to either capture a fingerprint for identification or to use the fingerprint for pointer movement control. Therefore, claims 3-4 are not obvious over O'Connor in view of Keagy.

Examiner rejected claims 1-4, 13, 15-16, 23 and 30-31 under 35 U.S.C. §102(e) as being anticipated by US Patent No. 5,991,431 of Borza. Borza discusses a mouse that has coupled to it a fingerprint sensor. The fingerprint sensor is separate from the pointer control device, which is provided by a conventional mouse mechanism. (Borza, col. 6, lines 39-47). Borza does not teach or suggest using parameters associated with the fingerprint image to configure the use of the fingerprint image. Rather, Borza uses standard mouse functionality for cursor movement, and fingerprint images are solely used for recognition. Therefore, as discussed above with respect to O'Connor, Borza uses separate devices for cursor control and fingerprint recognition. Therefore, for the same reasons described above with respect to O'Connor, the claims are not anticipated by or obvious over Borza.

Examiner rejected claims 5-12, 14, 17-22, and 24-29 under 35 U.S.C. §103(a) as being unpatentable over US patent No. 5,991,431 of Borza in view of US Patent No. 5,838,306 of O'Connor. As discussed above, both Borza and O'Connor discuss a mouse using conventional mouse techniques to provide pointer movement control and including a fingerprint sensor for biometric identification. Neither O'Connor nor Borza, alone or in combination, teach or suggest using the fingerprint images for pointer movement control based or for identification based on certain parameters, as recited in the claims. Therefore, the claims are not obvious over Borza in view of O'Connor.

Examiner rejected claims 1-2, 13, 15-16, 23, and 30-31 under 35 U.S.C. §102(b) as being anticipated by Japanese Patent No. 04158434 to Matsubashi ("Matsubashi"). Matsubashi discusses a cursor control mechanism that includes a fingerprint pattern

verification. Matsubashi uses comparison and judgment processing of the fingerprint which is executed only when the fingerprint is newly detected after a specified time has elapsed. (Matsubashi, page 6, last paragraph). Matsubashi uses this comparison to determine whether the cursor control signals are transmitted to the system or not. (Matsubashi, page 8, 2nd paragraph).

Claim 1, on the other hand, recites:

A touchpad device comprising:
a detection array having a detection surface, wherein the detection surface is configured to receive a fingerprint image;
a processing device to receive image data from the detection array, the processing device further to configure the touchpad device to operate as a pointer control device to move a cursor or a fingerprint recognition device based upon parameters associated with the image data.

(Claim 1, as amended). Matsubashi does not teach or suggest operating the device as a pointer control or fingerprint recognition device based upon parameters associated with the image data. Rather, Matsubashi specifically notes that the operation of the system is based upon time elapsed since the last time the image was validated. This is distinct from using parameters associated with image data, as claimed in claim 1. Therefore, Matsubashi does not anticipate claim 1. Claims 2 and 5-14 depend on claim 1, and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 1, claims 2 and 5-14 are not anticipated by or obvious over Matsubashi.

Similarly, claim 15 recites:

A multi-function device comprising:
means for supplying a fingerprint image to a detection surface of a detection array;
means for processing the fingerprint image supplied to the detection array, wherein the means for processing configures the multi-function device to operate as a pointer movement control device or a fingerprint recognition device based upon parameters associated with the fingerprint image.

(Claim 15). As discussed above with respect to claim 1, Matsubashi does not teach or suggest operating the device as a movement control device or a fingerprint recognition device based on parameters associated with the image. Therefore, claim 15 is not anticipated by or obvious over Matsubashi. Claims 16-22 depend on claim 15 and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 15, claims 16-22 are not anticipated by or obvious over Matsubashi.

Claim 23 recites:

23. A method of analyzing a fingerprint image to configure the operation of a multi-function device, comprising:
supplying a fingerprint image to a detection surface of a detection array;
analyzing select fingerprint parameters associated with the fingerprint image;
configuring the multi-function device to operate as a pointer movement control device or a fingerprint recognition device based upon the fingerprint parameters associated with the fingerprint image.

(Claim 23) (emphasis added). As discussed above with respect to claim 1, Matsubashi does not teach or suggest configuring the device to operate as a pointer movement control device or a fingerprint recognition device based on fingerprint parameters associated with the fingerprint image. Therefore, claim 23 is not anticipated by or obvious over Matsubashi. Claims 24-31 depend on claim 23 and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 23, claims 24-31 are not anticipated by or obvious over Matsubashi.

Applicants respectfully submit that in view of the amendments and discussion set forth herein, the applicable rejections have been overcome. Accordingly, the present and amended claims should be found to be in condition for allowance.

If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to contact Judith A. Szepesi at (408) 720-8300.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES
IN THE CLAIMS

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1. (Amended) A touchpad device comprising:
a detection array having a detection surface, wherein the detection surface is configured to receive a fingerprint image;

a processing device to receive image data from the detection array, the processing device further to configure the touchpad device to operate as a pointer control device to move a cursor or a fingerprint recognition device based upon parameters associated with the image data.

15. (Amended) A multi-function device comprising:
means for supplying a fingerprint image to a detection surface of a detection array;

means for processing the fingerprint image supplied to the detection array, wherein the means for processing configures the multi-function device to operate as a pointer movement control device or a fingerprint recognition device based upon parameters associated with the fingerprint image.

23. (Amended) A method of analyzing a fingerprint image to configure the operation of a multi-function device, comprising:

supplying a fingerprint image to a detection surface of a detection array;
analyzing select fingerprint parameters associated with the fingerprint image;
configuring the multi-function device to operate as a pointer movement control device or a fingerprint recognition device based upon the fingerprint parameters associated with the fingerprint image.